

General practitioners' beliefs about the clinical utility of complementary and alternative medicine

Aron Jarvis¹, Rachel Perry², Debbie Smith³, Rohini Terry⁴ and Sarah Peters⁵

¹School of Psychological Sciences, Centre for Health Psychology, University of Manchester, UK

²Research Assistant, Biomedical Research Unit, University of Bristol, UK

³The School of Psychological Science, The Manchester Centre for Health Psychology, UK

⁴Research Associate, School of Social and Community Medicine, University of Bristol, UK

⁵Senior Lecturer, School of Psychological Sciences, Centre for Health Psychology, University of Manchester, UK

Aim: To investigate GPs' beliefs about complementary and alternative medicine (CAM) and its role in clinical practice. **Background:** Despite the prevalence of CAM in the United Kingdom, little is known about GPs beliefs regarding these alternative approaches to patient management and how they view it in relation to their clinical conduct and practice. **Method:** A qualitative study conducted on 19 GPs recruited from the North West of England. Semi-structured telephone interviews were analysed using an inductive thematic analysis. **Results:** Three themes emerged from the data: limited evidence base, patient demand and concerns over regulation. **Conclusion:** Despite recognising the limited evidence base of CAM, GPs continue to see a role for it within clinical practice. This is not necessarily led by patient demand that is highly related to affluence. However, GPs raised concerns over the regulation of CAM practitioners and CAM therapies.

Key words: beliefs; complementary/alternative medicine; general practitioner; qualitative

Received 23 October 2013; accepted 14 April 2014; first published online 3 June 2014

Introduction

The most recent findings of population usage of complementary and alternative medicine (CAM) indicate lifetime and 12-month prevalence figures are 44 and 26%, respectively (Department of Health, 2005), and the most recent national figures assessing primary care provision of CAM treatments showed a rise from 40% of all GP practices offering access to CAM in 1995 to 50% in 2001 (Thomas *et al.*, 2003).

CAM covers a range of treatment approaches including homoeopathy, acupuncture, chiropractic, osteopathy, reflexology, aromatherapy and herbalism. The evidence base for many of these approaches is limited, although this

literature is hampered by methodological limitations (Posadzki *et al.*, 2012). Some CAM therapies are based on a very different paradigm to conventional medicine (eg, homoeopathy, which uses highly diluted substances to bring about cure rather than substances in their material form) hence their use within health services is considered controversial (Perry and Dowrick, 2000). However, a recent review (Wye *et al.*, 2009) of evaluations and audits of primary care CAM services assessed the impact on improving health outcomes and reducing NHS costs. One controlled and 11 uncontrolled studies [using Short Form (36) Health Survey; SF36 and 'measure yourself medical outcome profile'; MYMOP] indicated that these services have moderate to strong impact on health status scores. Nine other documents were of poor quality and conclusions could not be drawn from them. Data on the impact on NHS services were inconclusive, but the information on health status changes does suggest CAM may have some utility within primary care practice.

Correspondence to: Rachel Perry, MPHIL, Research Assistant Biomedical Research Unit, Education & Research Centre, Level 3 Upper Maudlin Street, Bristol BS2 8AE. Email: Rachel.Perry@bristol.ac.uk

Regardless of the impact on health, it is clear that CAM services are utilised by primary care practitioners. Perry *et al.* (2013) conducted a 10-year follow-up survey with Liverpool GPs and found the most popular CAMs were still acupuncture, hypnotherapy and chiropractic, whereas respondents were less supportive of homoeopathy, possibly due to the recent closure of NHS funded homoeopathy services. Overall, GPs were less likely to endorse CAMs than previously shown in 1999 (38 versus 19%).

van Haselen *et al.* (2004) surveyed both medical practitioners and patients and found that the most powerful mechanisms for driving CAM referrals were demand from patients due to lacking faith in conventional medicines. In their subgroup analyses, only 28% of GPs referred patients to CAM because they were 'convinced CAM worked' (p. 15), yet over 90% felt that CAM could contribute to the well-being of patients. Thus, implying that GPs are not providing CAM therapies based on their own convictions of improvements to physical health but due to patient demand and improvements to well-being.

The range of therapies placed under the heading of CAM is extremely varied and GPs' support is likely to differ according to modality. The qualitative perspective of CAM from non-academic UK GPs working within primary care remains absent from the literature. Previous qualitative research into professional opinions about CAM either looked at just one CAM modality (eg, homoeopathy, May and Sirur, 1998) or interviewed a small sample of academic GPs whose opinions are unlikely to represent those of the wider GP population (eg, Maha and Shaw, 2007). May and Sirur (1998) focused solely on GPs' views on the implementation of homoeopathy and found that although the GPs were positive about homoeopathy they viewed themselves primarily as medical practitioners focusing on conventional forms of treatment and were well aware of the limitations of homoeopathy. Another small qualitative study explored academic doctors' attitudes to all CAM (Maha and Shaw, 2007). Their views were categorised (the 'enthusiasts', the 'sceptics' and the 'undecided') and related to whether they practised a form of CAM. They concluded that lack of evidence made it very difficult to integrate CAM into the NHS, although recognised that CAM does provide alternatives for patients while additionally

making doctors feel some fulfilment in their practice. As non-academic GPs are seen as the gatekeepers to other medical services and now hold the commissioning powers for services, it is important to explore this group's for their beliefs on the role of CAMs in their clinical practice.

Method

Design

A qualitative semi-structured in-depth interview design was used to explore non-academic GPs beliefs about CAM and its role within their clinical conduct and practice, thereby extending previous qualitative work with academic GPs (Maha and Shaw, 2007) and gaining a fuller understanding of survey findings within the region (Perry *et al.*, 2013).

A topic guide (TG) was developed to serve as a flexible, participant-led framework for questioning. The TG was developed following a review of the literature, a pilot interview and discussions with the research team that includes experts in qualitative methods (SP, DS) and CAM (RP). The TG comprised questions about GPs clinical experience and practice demographics, understanding and experience of different types of CAM (personal training and referral to other CAM professionals), views about the evidence base and efficacy of CAM and role of CAM within clinical practice. All interviews were conducted by one researcher (AJ) who combined open questions to elicit free responses with focused questions for proving and prompting.

Sampling sought to achieve maximum variation of views by a range of GP experience and type of population the practice served. All GP practices in Liverpool (282 GPs) and Manchester (254 GPs) were contacted through a variety of methods (letter, telephone, email) with letters being the most successful form of recruitment. The final sample comprised 19 participants, all non-academic GPs. The majority of these were recruited by letter ($n = 16$) compared with three from Emails and none by telephone. All 19 audio recorded telephone interviews were conducted between January and April 2012.

Data analysis

An inductive thematic analysis was implemented in order to extract relevant themes that

summarise the entire data set in relation to a specific research question (Boyatzis, 1998). All interviews were recorded and transcribed verbatim. Themes were continuously compared against the data using a constant comparative approach (Henwood and Pidgeon, 1992). The transcripts were independently coded by two researchers (AJ and DS), and the emerging themes proposed and developed, then discussed with the wider team until agreement. Data generation and recruitment continued until the two independent researchers perceived that thematic saturation had been achieved: the point at which new data is no longer contributing to the findings due to repetition of themes and comments by participants (Morse, 1995).

The final sample comprised 19 GPs. Nearly two-thirds ($n = 12/19$) were female and the majority were White British ($n = 17/19$). The mean number of years since qualification was 21 (range 7 to 33 years) and the size of practice ranged from 2500 to 19000. One of the sample described having had formal training in homoeopathy. The GP practices were recruited from Liverpool and Manchester, areas in the North West of England that have some of the most deprived areas in England in (<http://www.apho.org.uk>). The majority of practices were located in the most deprived areas (top two quintiles based in Index of multiple deprivation) with only one from a less deprived area (quintile five). All of the GPs included in the sample defined themselves as non-academic GPs and none held a substantive appointment with a University.

Results

The findings are organised into three themes, several sub-themes and described in turn. Illustrative data are presented for each theme with GP's identifier displayed in parentheses.

Limited evidence base

The limited evidence base of CAM was prevalent in all of the interviewees' responses. CAM therapies were not held in the same regard as conventional treatments and not deemed appreciated in the 'scientific and therapeutic type menu' (GP 8). This criticism was particularly levied upon homoeopathy, which GPs perceived had the least

convincing evidence base: one GP describing the evidence as 'pretty, pretty dire' (GP 2). However, participants were conscious of the fact that a limited evidence base was not unique to CAM but true for much of conventional medicine too.

Impact on referral

Although it was frequently stated that CAM lacked a sufficient evidence base, participants did not rule out possible beneficial effects of CAM. Some were 'open minded' (GP 11) about the evidence base and tended to take the opinion that, '... just because there's no evidence for it, it doesn't mean that it doesn't necessarily work' (GP 15).

Furthermore, this limited evidence base was overlooked if the treatment was not going to harm the patient. Participants described themselves as being pragmatic in their decision-making and having no evidence base would not prevent referral to CAM:

'Yeah I don't know if this fits with what you're trying to say, most GPs are pragmatists aren't we, and we accept a lot of what we do is very difficult to find evidence for but we do it because patients seem to benefit and I suspect a lot of what CAM achieves is similar'
(GP 2)

It was also found that patients would ask for GPs' advice on a particular treatment and as long as it was harmless, GPs would be prepared to condone it.

'I will say to a patient that has come to ask for advice is that well you know I cannot say to you it will definitely have benefit but as long as it's not going to do you any harm then you're probably okay to try'
(GP 19)

Placebo effect

Participants were aware that any effectiveness observed from CAM could predominantly be due to the placebo effect. Interestingly, this was supported, with GPs outlaying the importance of utilising any placebo effect being presented to them.

'I think placebo effect or a better word for it is self-healing effect is very important, so I think every physician, every doctor and every healer whether they're conventional or otherwise

should maximise the placebo effect when they're dealing with a patient'

(GP 6)

'...well what there is I think is to do with placebo effect. I don't think placebo effect is invalid and I think it's something we should maybe learn more about but I don't think there's anything actually in the water or whatever'

(GP 10)

Financial impact

Participants recognised how difficult it was for CAM to provide an evidence base as it is difficult to conduct research in the same way as for conventional medicine. Many acknowledged how randomised controlled trials and double-blind trials have become the 'gold standard' (GP 12) within the literature over the past decades. However, GPs felt that, 'you can't assess complementary therapies in the same scientific way as you can other medication' (GP 8) and that in order to gain relevant evidence for CAM a 'move towards more narrative evidence' (GP 6) is required. In addition, participants could not envisage a role for CAM in the current financial climate, '...where there is evidence for benefit it would be reasonable to consider funding it' (GP 16). The general consensus was that the NHS can only provide money for something that has a sound evidence base.

'I wouldn't say there's a place for them at the moment in the current financial climate but I mean the medical evidence is looked at by NICE they look at things and they decide what is financially worthwhile and what isn't'

Owing to the limited NHS funds, CAM was viewed as being a low funding priority. Hence, participants were identifying a catch 22 situation; that more research into CAM is needed but restricted by limited funds.

Perceived patient demand

Socio-economic status

Participants stated how they '...get very, very little demand for it [CAM]' (GP 8) in their clinical practices and thus felt there is not enough demand to justify the funding and referral of CAM. GPs often attributed this lack of demand to the area that they worked in, which consisted of

a '...reasonably deprived working class population' (GP 16) and demonstrated in the IMD quintile rankings of the GP practices. This culminated in GPs stating that they have requests for CAM from '...the middle class' (GP 7) patients; reasoning that the middle classes '...are better read and possibly more able to demand things' (GP 11) and that CAM is a relatively expensive option so can only be afforded by a more wealthy demographic.

Individual effectiveness

Also the effectiveness of a treatment was considered to differ between each patient. Any benefits perceived could merely be due to individual differences; the 'patient is more susceptible and open to getting that form of treatment' (GP 17) and this would best predict that treatment's efficacy. Furthermore, some patients benefit greatly from the therapeutic effect of time; '...the [CAM] therapist is actually giving that patient a bit more time', which conventional doctors are not able to provide.

Chronic illness

GPs felt that some forms of CAM were an effective option for patients suffering from long-term chronic pain and illness. Furthermore, participants encouraged the implementation of CAM for palliative care:

'like aromatherapy for cancer patients, I think that's quite, you know, it must be lovely for someone to do something to you that makes you feel better'

(GP 13)

Moreover, they would most likely recommend CAM to a patient who 'had reached the end of the line with conventional medication or surgical options' (GP 1). However, it was reiterated that conventional treatments were participants' first option.

'I am a medical practitioner and that's my kind of first line of treatment and anything else say follows suit'

(GP 7)

Concerns over regulation, quality and drug interactions

Interaction with conventional medicine

GPs displayed a significant concern towards herbal remedies. There were concerns that certain

herbal remedies ‘...actually have active drug ingredients in them’ (GP 19) and that these remedies may ‘...interact with what has already been prescribed’ (GP 4) by GPs. Interviewees cited occasions when they had to ‘...get in touch with the local pharmacy department’ (GP 13) due to concerns over certain herbal remedies. GPs focused on anecdotal cases and predominantly alluded to the use of St. John’s Wort for depression as an example of a troublesome herbal remedy. Concerns over St. John’s Wort were voiced because ‘...the active ingredient is very much identical to some of the selective serotonin re-uptake inhibitors (SSRI) anti-depressants used, so there could be a significant interaction’ (GP 16).

Qualification/regulation

GPs were either unsure or completely unaware of the professional regulation and qualifications required to practice CAM in the United Kingdom.

‘I think if you’re going to be working in the NHS then presumably you might need some form of qualification but I’m not aware of whether or not you need that for the NHS’
(GP 1)

However, despite this lack of awareness, participants thought that CAM practitioners should be professionally regulated. Having greater confidence in the robustness of practitioner’s training and regulatory procedures enabled GPs to have greater confidence in endorsing certain CAM and referring to CAM practitioners.

‘Should have a training that has been recognised by an external body...so somewhere in it there’s a degree of accountability’
(GP 9)

Discussion

Summary of findings

GPs were well aware of the limited evidence base associated with CAM, yet at times, chose to ignore this in favour of their own clinical experience of managing patients. They could cite occasions where CAM had been useful, and they attributed this to a placebo effect, acknowledging that this was a positive outcome. The placebo effect could work in a number of ways: by enhancing self-healing, biding GPs time for the natural

history of the disease, or by improving well-being although not necessarily effecting a cure. GPs endorsed CAMs that made patients feel better as long as they caused no harm. They acknowledge that it is unrealistic for the NHS to fund something that has a limited evidence base and therefore do not endorse its inclusion in the NHS. However, GPs did endorse the funding of CAM for chronic pain, intractable problems and use in palliative care, mainly because individuals in these categories are left with few alternative options. GPs caring for primarily lower working class patients felt there was little demand for CAM in their practice and believed that CAM-use was related to more affluent patients. Further work is clearly needed to explore this in more practices from diverse social-demographic areas. Regardless, GPs perceived that CAM is in greater demand by those from particular demographic backgrounds and this is likely to lead to differential development of such services. GPs are uncertain as to qualifications and regulations associated with individual forms of CAM and are more comfortable referring to practitioners are fully trained and regulated by a governing body.

Strengths and limitations

This is the first study to explore the views of non-academic GPs on all CAM therapies regarding its role in clinical practice. This is particularly important at a time when GPs are taking a greater role in commissioning services for their communities. However, having such a geographically select sample of GPs may mean that it is difficult to generalise the findings to GPs in other parts of the United Kingdom or cross-culturally. Also the majority of these GPs were based in more deprived areas where demand for CAM is generally low compared with more affluent areas (Bishop and Lewith, 2008). It is also a possibility that the GPs who agreed to take part in the research had a vested interest in CAM and may have had a biased viewpoint in terms of implementation and effectiveness (Collier and Mahoney, 1996). In general, it appears that allocation of funding for CAM has not been based upon patient’s demographic details or the level of deprivation of the practice. Whether, now funding decisions have shifted to GPs, patient demographics might influence the extent to which CAM services are commissioned, will have to wait to be seen.

It is perhaps a further limitation of the study to have not addressed CAM therapies individually, as the GPs tended to respond to questions about CAM as a whole, which makes interpretation difficult at times (particularly when discussing evidence base). In hindsight we may have benefited from focussing on just one or two CAM therapies in favour of the broader perspective we took.

Comparisons with existing literature

The lack of high quality research into CAM was acknowledged and GPs identified the difficulty in obtaining a good evidence base, yet some were still content to refer to CAM despite this (Perry and Dowrick, 2000). This contrasts with the findings from the most recent GP survey (Perry *et al.*, 2013), which demonstrated GPs would refer to those therapies that did have a better evidence base (eg, acupuncture). The reasons for these changes were not properly explored but it could be postulated that the primary care trust (PCTs) were in control of the budget during this time period and held a tighter grip on spending.

One therapy that was frequently cited by participants as having a poor evidence base was homoeopathy, which would fit with the emerging opinions on homoeopathy from the literature (eg, Colquhoun, 2007; Ernst, 2009; Yu-Hin Hg, 2011; Perry *et al.*, 2013). It is unclear why homoeopathy in particular was singled out by the GPs interviewed and this would be an area worthy of future investigation. In the United Kingdom, there has been dramatic decline of NHS prescriptions for homoeopathic remedies: over 85% reduction from 2000 to 2010 according to the Information Centre for Health and Social Care (Beckford, 2011). Yu-Hin Ng (2011) suggests that the NHS has finite resources and it is questioned whether these limited resources can be spared on a treatment that possesses such a contentious evidence base. In fact, lack of NHS funding was cited as the main reason for low referral rates to any CAM within primary care. The general consensus among the participants was, due to restrictions on NHS funding, evidence based medicine should be prioritised. However, our participants were clear that evidence was not the only factor in making clinical decisions and that CAM, even where the evidence as questioned, had a role. Similarly, Adams (2000) surveyed GPs on their thoughts on integrative

medicine and found that although GPs acknowledged the value of evidence based medicine they would also consider their own clinical experience when making decisions on patient healthcare; some even saw evidence based medicine as a threat to their own clinical expertise. This view was also captured in our interviews.

Another claim by participants was their beliefs that any improvement in patient health was actually due to the placebo effect, suggesting that they regularly implement the placebo effect in relation to CAM. Lewith *et al.* (2001) found from their survey that physicians believed CAM predominantly works through placebo, thus should undergo rigorous testing before being accepted in primary care. They also expressed concern that encouraging CAM may prevent patients from receiving a more appropriate form of treatment. There are opposing views on the ethics of this idea; the major concern being patients may end up adopting an ineffective treatment over a more effective one (Ernst and White, 2007).

Another finding was that demand for CAMs was linked to patient demographics, with GPs feeling the reason they had little demand was due to the populations they served based on area and personal demographics. Interestingly, despite serving less affluent areas there was still some demand and GPs were still endorsing and referring to CAM (Perry *et al.*, 2013). This is important to highlight with the GPs having greater commissioning powers, as any changes in spending on CAM may reflect this demand.

Participants also expressed concern over the regulation of CAM, particularly herbal medicines. They demonstrated concern with the possibility of a conventional prescription drug being contraindicated with a herbal remedy; for example when St. John's wort is taken with SSRI antidepressants, it can lead to 'serotonin syndrome' that can be fatal (Ventola, 2010) and kava, a herbal sleeping remedy, has been known to cause severe liver dysfunction (Markman, 2002). The fact the participants were aware that certain CAM treatments can be dangerous was encouraging. Although, this may highlight a bias from GPs towards opposing herbal remedies, as both St. John's wort and Kava display good evidence for clinical effectiveness (Sarris and Kavanagh, 2009).

In general, participants were unaware of the qualifications required to practice CAM, although

some were aware of the governing bodies associated with chiropractic and osteopathy. This may reflect GPs' confusion about regulation of CAM and might be something that could be addressed by the various CAM representative bodies to enhance clarity and facilitate integration.

In light of the shift in purchasing power from PCT to GP consortia, spending on CAM may change considerably in the next few years. This change in legislation will inevitably impact CAM and it will be interesting to see how prevalent it will be now GPs once again have the commissioning powers. Whether CAM therapies would feature on the list of priorities is yet to be seen, and whether there will be any disparities between different primary care practices (eg, rural, urban, socio-economic, ethnicity, etc.) will be interesting.

Implications for research/clinical practice

Our study revealed that GPs do not seem to lack knowledge about the limited evidence base of CAM, but, regardless, perceive it to still have clinical utility through doing no harm, or providing potential benefits (possibly through the placebo mechanism), particularly for patients where conventional medicine had little more to offer. However, patient demand is perceived to be greatest among more affluent areas. Our GPs served less affluent areas where demand is lower yet CAM still appears to feature within clinical interactions and referrals to CAM practitioners. This is an area to gain further insight into.

The concept suggested by interviewees that CAM was condonable as long as it caused no harm, is interesting and should be explored in future research. It would be beneficial to explore GPs' definition of what they are inferring by endorsing CAM as long as it causes 'no harm'. Whether GPs are meaning physical harm, financial harm, harm caused through choosing an ineffective CAM treatment over a scientifically-proven conventional treatment or other factors. This would further identify GPs' motivations towards endorsing CAM in their clinical practice.

Confidence in referring to, or endorsing patients' use of CAM services requires GPs to be better informed of the regulatory status of different professionals, by recognised bodies such as the Health Professionals Council (HPC), and this should be a feature of any services commissioned within primary

Primary Health Care Research & Development 2015; **16**: 246–253

care. No CAM practitioners are currently registered with the HPC but this was not something that the majority of GPs were concerned about; most seemed happy for their patients to utilise CAM as long as it caused no harm and although the medico-legal implication of the NHS paying for an unregulated intervention was not raised by the GPs, this issue might need further exploration.

Acknowledgements

We are grateful to all the GPs who took part in the study.

Financial Support

None.

Conflicts of Interest

None.

Ethical Standards

Ethical approval was obtained from The University of Manchester Ethics Committee (ref.11313) and the relevant R&D departments (Manchester R&D ref. no. 2012/020 and Liverpool R&D ref. no. 05/331).

References

- Adams, J. 2000: General practitioners, complementary therapies and evidence-based medicine: the defence of clinical autonomy. *Complementary Therapies in Medicine* 8, 248–52.
- Beckford, M. 2011: NHS spending on homeopathy prescription falls to £122,000. *The Telegraph*. 30 August.
- Bishop, F.L. and Lewith, G.T. 2008: Who use CAM? A narrative review of demographic characteristics and health factors associated with CAM use. *eCAM* 7, 11–28.
- Boyatzis, R.E. 1998: *Transforming qualitative information: thematic analysis and code development*. London: Sage.
- Collier, D. and Mahoney, J. 1996: Insights and pitfall: selection bias in qualitative research. *World Politics* 49, 56–91.
- Colquhoun, D. 2007: Should NICE evaluate complementary and alternative medicines? *British Medical Journal* 334, 507.
- Department of Health. 2005: *Health survey for England: the health of older people*. London: HMSO.
- Ernst, E. 2009: A tale of homeopathic immunisation. *Pulse*, 2 September. Retrieved 30 August 2012 from http://www.pulsetoday.co.uk/main-content/-article_display_list/11011762/a-tale-of-homeopathic-immunisation

- Ernst, E.** and **White, A.** 2007: The BBC survey of complementary medicine use in the UK. *Complementary Therapies in Medicine* 8, 32–36.
- Henwood, K.L.** and **Pidgeon, N.F.** 1992: Qualitative research and psychological theorizing. *British Journal of Psychology* 83, 97–111.
- Lewith, G.T., Hyland, M.** and **Gray, S.F.** 2001: Attitudes to and the use of complementary medicine among physicians in the United Kingdom. *Complementary Therapies in Medicine* 9, 167–72.
- Maha, N.** and **Shaw, A.** 2007: Academic doctors' views of complementary and alternative medicine (CAM) and its role within the NHS: an exploratory qualitative study. *BMC Complementary and Alternative Medicine* 7, 1–11.
- Markman, M.** 2002: Safety issues in using complementary and alternative medicine. *Journal of Clinical Oncology* 20, 39–41.
- May, C.** and **Sirur, D.** 1998: Art, science and placebo: incorporating homeopathy in general practice. *Sociology of Health and Illness* 20, 168–90.
- Morse, J.M.** 1995: The significance of saturation. *Qualitative Health Research* 5, 147–49.
- Perry, R.** and **Dowrick, C.F.** 2000: Complementary medicine and general practice: an urban perspective. *Complementary Therapies in Medicine* 8, 71–75.
- Perry, R., Dowrick, C.F.** and **Ernst, E.** 2013: Complementary medicine and general practice in an urban setting: a decade on. *Primary Healthcare Research and Development* 10, 1–6.
- Posadzki, P., Alotaibi, A.** and **Ernst, E.** 2012: Prevalence of use of complementary and alternative medicine (CAM) by physicians in the UK: a systematic review of surveys. *Clinical Medicine* 12, 505–12.
- Sarris, J.** and **Kavanagh, D.J.** 2009: Kava and St. John's Wort: current evidence for use in mood and anxiety disorders. *The Journal of Alternative and Complementary Medicine* 15, 827–36.
- Thomas, K.J., Coleman, P.** and **Nicholl, J.P.** 2003: Trends in access to complementary or alternative medicines via primary care in England: 1995–2001. *Family Practice* 20, 575–77.
- van Haselen, R.A., Reiber, U., Nickel, I., Jakob, A.** and **Fisher, P.A.G.** 2004: Providing complementary and alternative medicine in primary care: the primary care workers' perspective. *Complementary Therapies in Medicine* 12, 6–16.
- Ventola, C.L.** 2010: Current issues regarding complementary and alternative medicine (CAM) in the United States. *Pharmacy and Therapeutics* 35, 461–68.
- Wye, L., Sharp, D.** and **Shaw, A.** 2009: The impact of NHS based primary care complementary therapy services on health outcomes and NHS costs: a review of service audits and evaluations. *BMC Complementary and Alternative Medicine* 9, 5.
- Yu-Hin Ng, D.** 2011: A discussion: the future role of homeopathy in the National Health Service (NHS). *Homeopathy* 100, 183–86.